



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/751,988

01/07/2004

Farid Chemat

00366.000187

3580

5514

7590

09/02/2008

FITZPATRICK CELLA HARPER & SCINTO  
30 ROCKEFELLER PLAZA  
NEW YORK, NY 10112

EXAMINER

LEFF, STEVEN N

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

09/02/2008

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/751,988	<b>Applicant(s)</b> CHEMAT ET AL.	
	<b>Examiner</b> STEVEN LEFF	<b>Art Unit</b> 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 5/22/08 has been entered.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- Claims 1, 2, 7-8, 10, and 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Armstrong (5711857).

Armstrong teaches a method of extracting a volatile natural substance from a biological material, wherein the biological material contains water (col. 1 line 10-14). More specifically Armstrong teaches introducing a biological material into a microwave chamber with the exclusion of solvent (col. 1 lines 10-14), irradiating the biological material with microwaves without reducing pressure in the microwave chamber (col. 5 lines 20-38) until at least some of the natural substance is released from the biological material (col. 2 lines 1-2), conveying the released natural substance from the microwave chamber into a condensation chamber by convection (col. 7 lines 60-67), cooling the released natural substance until it condenses (col. 7 lines 30-35) and finally conveying the released natural substance from the condensation chamber (col. 7 lines 66-67) using gravitational force (fig. 3 ref. #74).

Armstrong continues by teaching that the microwave chamber and the condensation chamber are parts of a closed system (fig. 3), that the condensation chamber is cooled in the wall region (col. 7 lines 30-35), that the condensation chamber has the

Art Unit: 1794

form of a vertically oriented cylinder (fig. 3 ref. #70), and further the condensation chamber is separated from the microwave chamber by a glass partition (col. 8 line 3) which has an upwardly tapering form (fig. 3 ref. # 42) and has an air-permeable aperture in the upper region (col. 6 lines 26-30).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
  2. Ascertaining the differences between the prior art and the claims at issue.
  3. Resolving the level of ordinary skill in the pertinent art.
  4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
- Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong (5711857).

Armstrong is taken as above however Armstrong is silent with respect to the condensation chamber being cooled specifically by water.

With respect to claim 11, Armstrong does teach that the condensation chamber is cooled in the wall region, where Armstrong further teach providing cooling liquid in the cooling jacket (col. 7 lines 30-36). Therefore since Armstrong teaches a cooling liquid for its art recognized and applicant's intended purpose of cooling the vapor (col. 7 lines 1-36) and since the selection of a known material based on its suitability for its intended use supports a prima facie obviousness determination (MPEP 2144.07), due to the fact cooling liquid is well known in that art to include water.

Therefore it would have been obvious to one of ordinary skill in the art to teach that the condensation chamber is cooled by water cooling, since Armstrong already teaches the advantage of providing a cooling fluid which circulates in a cooling jacket

(col. 7 lines 30-36) thereby reducing the overall costs since water is readily available and cheaper than a refrigerant or a cooling fluid other than water.

- Claims 3-5, and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong (5711857) in view of Mengal et al. (CA 2161127).

Armstrong is taken as above however Armstrong is silent with respect to the natural substance being a plant oil, that the microwave irradiation is controlled in such a way that a temperature below 100°C prevails in the microwave chamber, that the biological material is stirred for improved exposure and that the water discharged with the natural substance is fed to the microwave chamber, where the discharged water is at least partially separated from the natural substance by an overflow device and is fed to the microwave chamber.

Mengal et al. teach a method of extracting a volatile natural substance from a biological material, wherein the biological material contains water (pg. 5 line 1-2). More specifically Mengal et al. teach introducing a biological material into a microwave chamber with the exclusion of solvent (pg. 5 line 15+), irradiating the biological material with microwaves (pg. 7 line 3+) until at least some of the natural substance is released from the biological material (pg. 7 line 22+), conveying the released natural substance from the microwave chamber into a condensation chamber by convection (pg. 9 line 16+), cooling the released natural substance until it condenses (pg. 6 line 20) and finally conveying the released natural substance from the condensation chamber (pg. 9 line 16+).

Mengal et al. continue by teaching that the natural substance is a plant oil (pg. 5 lines 1-6), that the microwave irradiation is controlled in such a way that a temperature below 100°C prevails in the microwave chamber (pg. 6 line 30), that the biological material is stirred for improved exposure (pg. 7 line 13), and that the water discharged with the natural substance is fed to the microwave chamber (pg. 9 line 20-21).

However since the only difference between the prior art and the claims was a recitation of a specific material to be treated, such as plant oil, and a specific heating temperature of below 100°C, which is dependant upon the specific material being heated, one of ordinary skill in the art would have been motivated to combine the teachings of Armstrong and Mengal et al. since Armstrong teaches the claimed method steps in addition to teaching a plant material as Armstrong teaches citrus juice (col. 1 line 8),

Art Unit: 1794

since Mengal et al. specifically teach that the natural substance is a plant oil (col. 5 line 1), and that the microwave irradiation is controlled in such a way that a temperature below 100°C prevails in the microwave chamber (pg. 6 line 30).

Further, one of ordinary skill in the art would have been motivated to combine the teachings of Armstrong and Mengal et al. since one of ordinary skill in the art would not expect the method of the instant claims to perform differently than the prior art method, thus the claimed method is not patentably distinct from the prior art method (See MPEP 2144.04 IV A). "Where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation," (see MPEP 2144.05 IIA), as the normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of temperature ranges is the optimum temperature (see MPEP 2144.05 IIA) to achieve the desired extracting and purity with respect to a specific biological material under the most optimal conditions.

Therefore it would have been obvious to one of ordinary skill in the art to teach a specific material to be treated, such as plant oil, and a specific heating temperature of below 100°C, which is dependant upon the specific material being heated, since all the claimed elements were known in the prior art and one skilled in the art could have substituted the specific material to be heated and a specific maximum heating temperature with no change in their respective functions, thus yielding predictable results to one of ordinary skill in the art at the time of the invention where combining the two methods, each of which is taught by the prior art to be useful for the same purpose, flows logically from their having been individually taught in the prior art (see MPEP 2144.06), and since MPEP 2144.07 states that the selection of a known process based on its suitability for its intended use supports a prima facie obviousness determination.

One of ordinary skill in the art would have been further motivated to combine the teachings of Armstrong and Mengal et al. and teach that the biological material is stirred since Armstrong teaches the desire to provide a quicker and more efficient method of concentrating liquids (col. 5 lines 6-8), and since Mengal et al specifically teach stirring the biological material during the microwaving step for its art recognized and applicant's intended purpose of improving the exposure of the biological material (pg. 7 line 13) thus reducing the time required to cause the liquid material to change to a vapor phase.

Therefore it would have been obvious to one of ordinary skill in the art to teach that the biological material is stirred since all the claimed elements were known in the prior art and one skilled in the art could have incorporated a means for causing the biological material to be stirred into the method of Armstrong with no change in respective functions, thus yielding predictable results to one of ordinary skill in the art at the time of the invention where combining the two methods, each of which is taught by the prior art to be useful for the same purpose, flows logically from their having been individually taught in the prior art (see MPEP 2144.06).

Further, since MPEP 2144.07 states that the selection of a known process based on its suitability for its intended use supports a prima facie obviousness determination, where in the instant case Mengal et al specifically teach stirring the biological material during the microwaving step for its art recognized and applicant's intended purpose of improving the exposure of the biological material (pg. 7 line 13), it would have been obvious to combine the teachings of Armstrong and Mengal et al. to one of ordinary skill in the art since stirring the fluid material would reduce the time required to cause the liquid material to change to a vapor phase thus providing a quicker and more efficient method, as is desired by Armstrong (col. 5 lines 6-7) and subsequently increasing profits by reducing the overall processing times due to the increased exposure as is taught by Mengal et al.

Regarding claims 14 and 15, although Armstrong does not specifically teach that the discharged water is at least partially separated from the natural substance by an overflow device and is fed to the microwave chamber, Armstrong does teach the desire to concentrate a liquid by removing water therein by distillation (col. 5 lines 3-14). In addition, Mengal et al. does teach that the water discharged with the natural substance is fed to the microwave chamber after decantation (pg. 9 line 20-21), where decanting is the process of transferring "liquid from one vessel in order to separate a small volume of liquid, containing the sediment, from a larger volume of "clear" liquid, which is free of such. In the process, the sediment is left in the original vessel, and the clear liquid is transferred to the decanter" (reference. COM.).

Therefore one of ordinary skill in the art would have been motivated to combine the teachings of Armstrong and Mengal et al. and teach that the discharged water is at least partially separated from the natural substance by an overflow device and is fed to

the microwave chamber, since Armstrong teaches the desire to provide an efficient method of distilling beverages where distilling provides a concentrated liquid, and since Mengal et al. teach re-cycling the separated water back to the microwave enclosure for further extraction and optimizing liquid concentration.

Thus it would have been obvious to one of ordinary skill in the art to teach that the discharged water is at least partially separated from the natural substance by an overflow device and is fed to the microwave chamber into the invention of Armstrong since Armstrong teaches the desire to provide a quicker and more efficient method of concentrating liquids (col. 5 lines 6-8), and since Mengal et al. specifically teach the advantage of decanting for its art recognized and applicant's intended purpose of assisting in extracting a volatile natural substance from a biological material and teaching feeding the separated residual water back to the treating chamber for further processing thus proving a more efficient distillation of beverages as is desired by Armstrong (col. 5 line 7) since the material is treated multiple times as opposed to a single time.

In addition, since all the claimed elements were known in the prior art and one skilled in the art could have treated a biological fluid more than once, with no change in their respective functions, thus yielding predictable results to one of ordinary skill in the art at the time of the invention where combining the two methods, each of which is taught by the prior art to be useful for the same purpose, flows logically from their having been individually taught in the prior art (see MPEP 2144.06) thus proving a more efficient distillation of beverages as is desired by Armstrong (col. 5 line 7) since the material is treated multiple times as opposed to a single time.

- Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong (5711857) in view of Chen et al. (Determination of dichlorvos by on-line microwave-assisted extraction... Journal of Chromatography; 2002.)

Armstrong is taken as above, however Armstrong does not teach that the microwave chamber has an obliquely arranged, rotatable receiving container for improved exposure of the biological material.

With respect to claim 6, Chen et al. teach a solvent-less method of irradiating vegetables using microwaves, and a cooling condenser connected therewith for the recovery of specific by-products. More specifically Chen et al. teach an obliquely



arranged, rotatable receiving container for improved exposure of the biological material (fig. 1, pg. 351).

Therefore, one of ordinary skill in the art would have been further motivated to combine the teachings of Armstrong and Chen et al. and teach that the microwave chamber has an obliquely arranged, rotatable receiving container for improved exposure of the biological material since Armstrong teaches the desire to provide a quicker and more efficient method of concentrating liquids (col. 5 lines 6-8), and since Chen et al specifically teach an obliquely arranged, rotatable receiving container (fig. 1, pg. 351) for its art recognized and applicant's intended purpose of improving the exposure of the biological material (pg. 7 line 13) thus reducing the time required to cause the liquid material to change to a vapor phase.

Therefore it would have been obvious to one of ordinary skill in the art since all the claimed elements were known in the prior art and one skilled in the art could have incorporated an obliquely arranged, rotatable receiving container as is taught by Chen et al. (fig. 1, pg. 351) into the method of Armstrong with no change in respective functions, thus yielding predictable results to one of ordinary skill in the art at the time of the invention where combining the two methods, each of which is taught by the prior art to be useful for the same purpose, flows logically from their having been individually taught in the prior art (see MPEP 2144.06).

Further, since MPEP 2144.07 states that the selection of a known process based on its suitability for its intended use supports a prima facie obviousness determination, where in the instant case Chen et al specifically teach an obliquely arranged, rotatable receiving container (fig. 1, pg. 351) for its art recognized and applicant's intended purpose of improving the exposure of the biological material (pg. 7 line 13) it would have been obvious to combine the teachings of Armstrong and Chen et al. to one of ordinary skill in the art since an obliquely arranged, rotatable receiving container as is taught by Chen et al. (fig. 1, pg. 351) would reduce the time required to cause the liquid material to change to a vapor phase thus providing a quicker and more efficient method, as is desired by Armstrong (col. 5 lines 6-7) by reducing the overall processing times due to the increased exposure thereby reducing the overall required power or time consumption to treat a specific material, and thereby decreasing the processing costs required to produce the product and subsequently increasing profits.

- Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Armstrong (5711857) in view of Malvin et al. (3578567).

Armstrong is taken as above, however Armstrong is silent with respect to heat being fed into a transition region between the microwave chamber and the condensation chamber to assist convection.

Malvin et al. teach a condensation chamber which is separated from a microwave chamber by a partition which has an upwardly tapering form and has an air-permeable aperture in the upper region (col. 4 line 4+), and that heat is fed into a transition region between the microwave chamber and the condensation chamber to assist convection (col. 3 line 42-51).

Therefore one of ordinary skill the art would have been motivated to combine the teaching of Armstrong and Malvin et al. and fed heat into a transition region between the microwave chamber and the condensation chamber since Armstrong teaches a vapor transfer tube (col. 7 line 63) and the desire to provide a quicker and more efficient method of concentrating liquids (col. 5 lines 6-8) and since Malvin et al. teach the addition of heat in this region for its art recognized and applicant's intended purpose of assisting convection (col. 4 line 8+).

Therefore it would have been obvious to one of ordinary skill in the art to teach providing heat in the vapor transfer tube since all the claimed elements were known in the prior art and one skilled in the art could have fed heat into a transition region between the microwave chamber and the condensation chamber as is taught by Malvin et al. (col. 3 lines 42-51), into the method of Armstrong, with no change in respective functions, thus yielding predictable results to one of ordinary skill in the art at the time of the invention.

Further, since the normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine optimal conditions (see MPEP 2144.05 IIA), where combining the two methods, flows logically from their having been individually taught in the prior art (see MPEP 2144.06) since providing heat in the transition region would further assist in extracting a volatile natural substance from a biological material, thereby reducing the overall required power or time consumption to treat a specific material, due to the fact that the vapor will not begin to condense prior to

Art Unit: 1794

actually reaching the condenser and thereby increasing the overall output of the process required to produce the product.

### ***Response to Arguments***

With respect to Mengal et al. being silent with respect to the limitation "without reducing pressure in the microwave chamber", Mengal is not used to teach this limitation, where "without reducing pressure in the microwave chamber" is already taught by Armstrong. Mengal et al. is used as a teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, In re Nievelt, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), In re Keller 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, namely that the natural substance is a plant oil (col. 5 line 1), that the microwave irradiation is controlled in such a way that a temperature below 100°C prevails in the microwave chamber (pg. 6 line 30), that the biological material is stirred for improved exposure (pg. 7 line 13), and that the water discharged with the natural substance is fed to the microwave chamber (pg. 9 line 20-21), and in combination with the primary reference, discloses the presently claimed invention.

In addition applicants' are reminded that according to MPEP 2141.01 (a), a reference may be relied on as a basis for rejection of an applicants' invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned." A reasonably pertinent reference is further described as one which "even though it maybe in a different field of endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." Mengal et al. are, therefore, is a reasonably pertinent reference, because it teaches methods of extracting natural substances from biological material, which is a function especially pertinent to the invention at hand under specific conditions.

Further in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Mengal et al. all teaches a solvent-less extraction method where one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See In re Keller, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); In re Merck & Co., 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Regarding applicant's assertion that Chen does not teach a solvent-less system, applicant is urged to page 350 section 2.1 which specifically teaches deionized water.

Further regarding applicant's assertion that Chen, and Malvin et al. do not teach a solvent-less system, it is noted that according to MPEP 2141.01 (a), a reference may be relied on as a basis for rejection of an applicants' invention if it is "reasonably pertinent to the particular problem with which the inventor is concerned." A reasonably pertinent reference is further described as one which "even though it maybe in a different field of endeavor, it is one which, because of the matter with which it deals, logically would have commended itself to an inventor's attention in considering his problem." Chen et al. and Malvin et al. are, therefore, reasonably pertinent references, because they teaches methods of extracting natural substances from biological material, which is a function especially pertinent to the invention at hand and an obliquely arranged, rotatable receiving container for improved exposure of the biological material (fig. 1, pg. 351), where Malvin specifically teaches that heat is fed into a transition region between the microwave chamber and the condensation chamber to assist convection (col. 3 line 42-51).

Further in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Chen et al., and Malvin teach an extraction method where one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986), where Chen is being relied upon to teach an obliquely arranged, rotatable receiving container for improved exposure of the biological material (fig. 1, pg. 351), and Malvin to teach feeding into a transition region between the microwave chamber and the condensation chamber to assist convection (col. 3 line 42-51).

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steven Leff whose telephone number is (571) 272-6527. The examiner can normally be reached on Mon-Fri 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached at (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1794

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Drew E Becker/

Primary Examiner, Art Unit 1794

/S. L./

Examiner, Art Unit 1794